CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY

Name(s)
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Project Number
J0409

Project Title
The Best Amount of Yeast for Dough Rising

Abstract

Objectives/Goals
The objective is to determine the best quantity of yeast for dough rising. I hypothesize that more yeast makes the dough rise larger and quicker.

Methods/Materials
Six pieces of dough were made at 70 degrees Fahrenheit in each experiment. A total of five experiments were conducted. Each piece of dough contained the same ingredients (8 tablespoons of sugar, ¼ teaspoon of salt, 2 cups of flour, and # cup of warm water) but variable amounts of yeast. The first piece of dough had no yeast (the control), the second had one teaspoon of yeast, the third had two, and so on. The volume of each piece of dough was measured at every hour for four hours. The relation of different amounts of yeast, dough volume change and time was plotted.

Results
The dough with increasing amount of yeast rose larger and quicker in four out of five experiments, until a best quantity (four teaspoons) of yeast was reached.

Conclusions/Discussion
The best quantity of yeast for dough rising was four teaspoons per piece of dough. Before reaching the best quantity, adding more yeast made the dough rise better. Excess yeast did not appear to help dough rising; in contrast, it impeded the process, probably by exhausting nutrients and producing ethanol.

Summary Statement
This project focuses on identifying the best amount of yeast for dough rising.

Help Received
My parents helped with data analysis and science fair board.